

OPEN STANDARD FOR XANASTRUCTURE: HIGHLIGHTS *

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*Note: this is approximately a design specified in detail in 1981 at Datapoint Corporation by myself and colleagues Stuart Greene and Mark Miller. It is principally my 1967 design, adjusted for span-links and transclusions as in the XOC server.

MAIN IDEAS OF THE XANADU® PROJECT, NOW BEING PUT IN PUBLIC DOMAIN:

UTTERLY GENERALIZED CONNECTIONS • links • transclusions

UTTERLY GENERALIZED LINKS, between "left endset" (arbitrary collection) and "right endset" (arb. collection) • External • Applicative • Unlimited number of Extensible Types • Visible and followable from both directions

PLURALISTIC! All materials may be freely and unrestrictedly linked and re-used.

PARALELLIZED DATA CLUSTERS

Streaming data (such as text, audio, video frames) is split into headerless streaming files, so they may be linked to and transcluded by anyone, and marked up in many different ways. This corrects the fundamental errors of SGML and HTML.***

*** SGML and HTML are anti-pluralistic: the links and markup are unchangeable by any but the owner. We propose instead an Utterly General Markup Language, where SGML-type markup is brought out into a parallel stream, where it may be freely transcluded and marked up differently by anyone else.

DOCUMENT (do we need a better word?) NOT TIED TO AN ADDRESS!

A document is a nameplex (name, title, subtitles...) associated with

One or more versions, *and/or*

A History of Changes in Hypertime.

The full document, then, includes its history, and movement forward, backward and among alternatives is well defined. This relaxes and resolves the problem of "data synchronization."

EDITING SYSTEM UTTERLY GENERALIZED FOR PUBLICATION

Anything is constantly modifiable. Old links on old versions remain valid, punch through to same bytes in new versions.

TRANSCOPYRIGHT

A permission doctrine encapsulated in a simple word (just as "shareware" is a permission doctrine encapsulated in a simple word), where

- the rightsholder gives permission for virtual, transclusive republication in any new context *provided that*
- delivery of the transcopyrighted elements is from a server designated by the rightsholder.

Note that transcopyright already works just fine on the Web for graphics, with no implementation necessary--the mechanisms are already built in. Further Transcopyright details and formats are presently being developed at Keio University and the Transcopyright Institute.

MICROPAYMENT FOR MEDIA CONTENTS: Doctrine of *pro rata* sale for transcluded copies: A typical royalty ought to be in the region of 200 nanobucks per text byte (roughly what an author gets for a paper copy) and 1800 nanobucks per video frame (roughly what you pay in a video store).

XANADU SERVICES: The following have always been part of the intended services, which may yet be offered under the Xanadu trademark.

- Title listing service for committed publications (guaranteed to remain published awhile)
- Readdressing service, caching service as permissible
- Storage service, Backup service, edit change storage, version management
- Linkage management, Transclusion management
- Electronic publication ("server storage" for Web pages and better)
- Sale by the element*, Automatic royalty to rightsholder